

**SUBSTITUTE SPECIFICATION – MARKED-UP COPY****KALANCHOE PLANT NAMED 'CASSANDRA'****LATIN NAME OF GENUS AND SPECIES OF PLANT CLAIMED***Kalanchoe blossfeldiana***VARIETY DENOMINATION***'Cassandra'***RELATED APPLICATION INFORMATION**

This application is a continuation of U.S. Serial No. 09/993,459 filed on November 19, 2001, which is now abandoned.

**BACKGROUND OF THE INVENTION**

The present invention comprises a new and distinct Kalanchoe plant, botanically known as *Kalanchoe blossfeldiana*, and hereinafter referred to by the cultivar name 'Cassandra'.

The new cultivar was developed by the inventor through a controlled breeding program during August 1997 in The Netherlands. The female (seed) parent of 'Cassandra' was the proprietary *Kalanchoe blossfeldiana* selection designated '93226-14' (not patented), characterized by its red flowers and good branching habit. The male (pollen) parent of 'Cassandra' was the proprietary *Kalanchoe blossfeldiana* selection designated '95012' (not patented), characterized by its red-orange flowers and dark green foliage. 'Cassandra' was discovered and selected as a flowering plant within the progeny of the stated cross by the inventor in June 1998.

Asexual reproduction of the new cultivar at Arroyo Grande, California  
and West Chicago, Illinois, has been through the use of terminal vegetative  
cuttings and by terminal cuttings has demonstrated that the characteristics of  
the new cultivar as herein described are firmly fixed and retained through  
successive generations of such asexual propagation.

#### SUMMARY OF THE INVENTION

It was found that the cultivar of the present invention:

- (a) exhibits bright red flowers,
- (b) forms dark green foliage,
- (c) exhibits a good basal branching character, and
- (d) exhibits a compact upright growth habit.

The new cultivar of the present invention can be compared to 'Arjuno' (United States Plant Patent # 10,485). In side by side comparisons with 'Arjuno', it is found that the new cultivar is more compact, in terms of plant height and the number of branches, and has fewer flowers per plant. A detailed comparison can be found in Table A 1.

#### BRIEF DESCRIPTION OF PHOTOGRAPH

The accompanying photograph shows as nearly true as it is reasonably possible to make the same in color illustrations of this type, typical flower and foliage characteristics of the new cultivar. The plants were grown in a greenhouse at West Chicago, Illinois, U.S.A.

### DETAILED BOTANICAL DESCRIPTION

The cultivar - 'Cassandra' has not been observed under all possible environmental conditions to date. Accordingly, it is possible that the phenotype may vary somewhat with variations in the environment, such as temperature, light intensity, and day length.

The chart used in the identification of colors described herein is the R.H.S. Colour Chart of The Royal Horticultural Society, London, England. The color values were determined on January 4, 2001 between 9:00 and 9:30 am under natural daylight. The plants used for the following observations and measurements were produced from cuttings taken from stock plants and grown in West Chicago, Illinois in 40cm 10 cm pots for sixteen (16) weeks. Plants were grown in a double poly carbonate covered greenhouse under conditions comparable to those used in commercial practice while utilizing a soilless growth medium and maintaining temperatures of approximately 82°F during the day and approximately 66°F during the night. Plants were exposed to three weeks of long days followed by 9 weeks of short days. Growth regulators were applied as follows: B nine, 3000 ppm at days 17 and 28 and 1500 ppm day 42.

Classification:

Botanical - *Kalanchoe blossfeldiana*, cultivar 'Cassandra'.

Pareantage:

Male (pollen) parent - Proprietary *Kalanchoe blossfeldiana*  
selection #95012, Female (seed) parent - Proprietary *Kalanchoe*  
*blossfeldiana* selection #93226-14, Propagation:

*Type cutting* - Terminal tip,

*Time to Initiate Roots* - Approximately 7-14 days with the shorter times  
generally being experienced in the summer and the longer times  
in the winter.

*Time to develop roots* - Approximately 21 days.

*Root Description* - Fibrous, branching.

**Plant Description:**

*Habit of Growth* - Moderately vigorous with good basal branching. A mature  
plant, at 16 weeks after the planting of an unrooted cutting, commonly  
measures approximately 11 cm in height and approximately 15.4 cm in  
width.

*Branching habit* - Typically forms one main stem 8 cm in length and 7 mm in  
diameter and 12 lateral branches approximately 5.6 cm in length and 3  
mm in diameter. Internode length on main stem: Approximately 1.5  
cm.

*Plant Form* - Upright and mounded.

*Foliage* - Form: Simple. Arrangement: Opposite. Shape: Ovate, with obtuse  
apex, attenuate base and crenate margin. Texture: Glabrous, succulent.  
Size of mature foliage: Approximately 7.8 cm in length and  
approximately 5.5 cm in width. Color of mature foliage: Upper surface

closest to 147A lower surface between 147A and 147B. Petiole length:

Approximately 9 mm. Petiole color: 144A. Petiole diameter:

Approximately 4 mm.

**Flower Description:**

*Flowering Habit* - Freely flowering.

*Natural Flowering Season* - Early January. Flowering time is dependent on temperature, light intensity and other growing conditions.

*Flowering response time* - Approximately 10 weeks.

*Inflorescence type* - Dichasial cymes.

*Flowers Borne* - Above foliage.

*Flower longevity* - Approximately 7 days.

*Fragrance* - None.

*Quantity of Flowers* - Approximately 10 flowers on main stem and 8 flowers on each lateral branch.

*Flower buds* - Shape: Elliptical, becoming elongated as it matures. Size just before opening: Length is approximately 8 mm, width is approximately 3 mm. Color: 39A.

*Flower*- Salverform. Corolla: Diameter is approximately 1.9 cm, depth is approximately 6 mm and aspect is flat. Corolla tube is approximately 1.1 cm in length and 3 mm in diameter.

*Petals* - Number: Average of 5. Shape: Ovate with cuspidate apex, rounded base. Approximate size: 9 mm in length, 6 mm in width. Aspect: Slightly convex. Texture: Glabrous. Appearance: Somewhat iridescent.

*Mature Flower Color* - Upper surface of petals is closest to 45B fading to between 53C and 53D,

at senescence; lower surface of petals is closest to 45D with overlay of 37C.

*Sepals* - Number: Average of 5. Shape: Lanceolate with acute apex, entire margin. Size: 7 mm

in length, 1 mm in width. Texture: Smooth. Color: Upper and lower surface: 144B *Peduncle* - Approximately 2.7cm in length and 4 mm in diameter.

*Pedicel length* - Approximately 5 mm.

*Reproductive Organs* - Androecium: 8 stamens arranged in two groups of four - one group being shorter than the other. Anther shape is oblong and flat, length is approximately <1 mm. Pollen color is 6C. Gynoecium: Stigma shape is flat, appearance is crystalline, colorless and transparent. Style length is approximately 4 mm, color is 151 D. Ovary is 4 celled, 7mm in length. Color is Between 144A between 144 A and 144B.

*Seed development*: Seed development has not been observed.

*Disease resistance*: Resistance to known Kalanchoe pathogens has not been observed.

TABLE A1

CHARACTERISTIC	'CASSANDRA'	'ARJUNO'
PLANT HEIGHT	11 cm	14 cm
NUMBER OF BRANCHES	12	14
APPROXIMATE NUMBERS OF FLOWERS PER PLANT	100	200